

REMARKS

This is in response to the Office Action dated July 27, 2005, in which claim 18 was rejected under 35 U.S.C. § 112; claim 14 was objected to; and claims 1-18 and 42-48 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Sheridan (U.S. Patent No. 5, 917,646) in view of Richley et al. (U.S. Patent No. 6,348,908). With this Amendment, claims 20-28, 31-41, and 49 have been canceled and claims 6, 7, 9-14, 16-18, and 42-49 have been amended. In reliance on the following remarks, the present application with pending claims 1-18 and 42-48 is in condition for allowance, and reconsideration and notice to that effect is respectfully requested.

Rejection under 35 U.S.C. § 112

In the Office Action, claim 18 was rejected under 35 U.S.C. § 112 for insufficient antecedent basis. Claim 18 has been amended such that “supporting structure” reads “support substrate”. In light of the amendment, the rejection to claim 18 under 35 U.S.C. § 112 should be withdrawn and claim 18 allowed.

Objection

In the Office Action, claim 14 was objected to because of an informality. Claim 14 has been amended to correct the typographical error. In light of the amendment, the objection to claim 14 should be withdrawn and claim 14 allowed.

Rejection under 35 U.S.C. § 103(a)

In the Office Action, claims 1-18 and 42-49 were rejected under 35 U.S.C. § 103 as being unpatentable over Sheridan in view of Richley et al. The Office Action’s reliance on FIG. 2 of Sheridan as teaching a visual display having an array of transparent lenses, where at least a part of each lens is in direct contact with a receiving position for responsive elements on the surface structure of the support structure such that the receiving position at least in part inherently defines the lens shape and location, is misplaced. The receiving position is the cavity in which the responsive element is located. Sheridan does not show, suggest, or teach an array of lenses where at least a part of each lens is in direct contact with a receiving position on the surface structure of the support structure. Sheridan also does

not show, suggest, or teach that the receiving position inherently defines the lens shape and location. Rather, Sheridan teaches away from such a configuration. Sheridan teaches an array 27 of converging lenses disposed between light source L and balls 21. (Col. 5, lines 5-7). As shown in FIG. 2 of Sheridan, array 27 of lenses is not in direct contact with the surface structure 25 of the support substrate 22 such that the receiving position (i.e. the portion or cavity 23 receiving the balls 21) inherently defines the lens shape and location. Rather, array of lenses 27 is formed on top of cavities 23 and surface structure 25 of support substrate 22 such that cavities 23 and surface structure 25 are separate from array of lenses 27. Surface structure 25 then cannot define lens shape and location. By contrast, claims 1 and 13 of the present invention require that at least a part of each lens is in direct contact with a receiving position for the responsive elements on the surface structure of the support structure such that the receiving position at least in part inherently defines the lens shape and location. The “receiving position” as claimed in claims 1 and 13 refer to the cavity in which the responsive element is located. As stated in the specification, “the present invention includes a converging lens 38 disposed at the top perimeter edge 37 of a cavity 33” and is formed within substrate 9 such that the surface structure 37 defines the shape and location of lens 38. (Page 13, lines 8-9, FIGS. 1A, 2, and 4). “...the membrane 48 is withheld at top perimeter edge 37 of the cavities 33 but pushed into each cavity 33 in the middle, the membrane 48 is contoured into a spherical surface (lens 38) in each cavity 33.” (Page 19, lines 1-4). Sheridan does not show, suggest, or teach an array of lenses that are in direct contact with a receiving position on the surface of the support structure such that the receiving position inherently defines the lens shape and location.

Claims 1 and 13 require an array of lenses where at least a part of each lens is in direct contact with a receiving position for responsive elements on the surface structure of the support structure such that the receiving position at least in part inherently defines the lens shape and location. Therefore, the rejections of claim 1 and 13 under 35 U.S.C. § 103(a) as being unpatentable over Sheridan in view of Richley et al. should be withdrawn and claims 1 and 13 allowed.

In that claim 1 is in condition for allowance, the rejection to claims 2-12, 15-18, and 42 which depend therefrom, should be withdrawn and claims 2-12, 15-18, and 42

allowed as well. In that claim 13 is in condition for allowance, the rejection to claims 14 and 43-48, which depend therefrom, should be withdrawn and claims 14 and 43-48 allowed as well.

In the Specification

Upon review of the specification, several inconsistencies were noted. The specification has been amended to correct these inconsistencies.

In the Figures

FIG. 2 has been amended to include a reference numeral inadvertently omitted in the original submission. The reference numeral "37" has been added. The Examiner may note line 9 of page 13 of the specification to see that the reference number "37" was assigned to the top perimeter edge of the cavity.

FIG. 4 has been amended to include reference numerals inadvertently omitted in the original submission. The reference numerals "33", "38", and "42" have been added.

Conclusion

In view of the foregoing, pending claims 1-18 and 42-48 are in condition for allowance. Notice to that effect is respectfully requested.

The Commissioner is authorized to charge any additional fees associated with this paper or credit any overpayment to Deposit Account No. 11-0982.

Respectfully submitted,

KINNEY & LANGE, P.A.

Date: 10/07/05

By: 

Ann Kulprathipanja, Reg. No. 50,608
THE KINNEY & LANGE BUILDING
312 South Third Street
Minneapolis, MN 55415-1002
Telephone: (612) 339-1863
Fax: (612) 339-6580

AK:hlw